



COMPLETE COTTON PACKAGE FOR FARMERS BY VST SHAKTI POWER TILLER



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INTRODUCTION

VST SHAKTI 130DI POWER TILLER - BEST IN THE FIELD FOR COTTON CROP

VST Shakti gives a guide for complete cotton package for farmers. It aims to cover complete process, agricultural implements required, key benefits of using VST tillers for cultivation and economics of cotton farming.



KEY FEATURES

- Rotary widths: 600 & 540 mm.
- Turning Radius: with brake 1.0 mt; without brake 1.5 mt
- Best for Inter Cultivation – 1.22 mt & 1.53 mt width.
- Less soil compaction; very good tilling; 25% increase in yield and field coverage.
- Robust transmission assembly design, which is capable of taking extreme loads even on dry soil.

KEY BENEFITS

- First company to introduce Power Tillers as farm machinery replacing manual farming.
- Easy maneuverability & light in weight.
- Unique Japanese design; easy availability of spares & service; good resale value.
- Established brand over decades in the farming community.

FIELD PREPARATION

CULTIVATOR

A Cultivator is used to break up the soil prior to sowing. It is drawn by a power tiller.



KEY FEATURES

- Tines / blades are designed for heavy duty working.
- 5 tynes are provided in rigid type cultivators.
- 0.25 ~ 0.4 acres can be cultivated in 1 hour with average diesel consumption of 1.0 ~ 1.25 lts / hr of operation

KEY BENEFITS

- Rigid cultivator is used for tilling soil.
- Helps in preparing the soil for a new crop.
- Has high strength & rigidity.
- Tough in construction.

FIELD PREPARATION

ROTARY ASSEMBLY

A rotary assembly is a mechanized device used for breaking up the topsoil in the process of preparation before planting. Spinning blades are attached to the tiller that will spin and slice into the soil in order to create loose topsoil to make it ready for planting.



KEY FEATURES

- 18 tynes can be fitted for best performance in dry land.
- Straight tynes recommended for dry field.
- 0.3 ~ 0.45 acres of land can be covered in 1 hr with average diesel consumption of 1.25 ~ 1.50 lts / hr
- Depth of Tilling is 150 ~ 225 mm.

KEY BENEFITS

- Simple in construction with strong design appropriate for varied soil conditions
- The application includes : Soil conditioning, weed control, seedbed preparation.
- Most suitable for medium & small farmers.
- Sturdy Construction
- Minimum load on Tiller.

FIELD PREPARATION

RIDGER

The ridger is used for making ridges for row crops and for opening furrows for water flow.



KEY FEATURES

- Depth (adjustable) of the furrow is 250 to 300 mm
- Width (adjustable) of the furrow is 375 to 450 mm
- Covers 0.2 ~ 0.35 acres in 1 hour.
- Consumption of diesel is 1.0 ~ 1.25 lts / hr

KEY BENEFITS

- It consists of rectangular frame made of mild steel angle or channel section, 3 -point hitch assembly, shanks and ridger body.
- The share point is made from medium carbon steel or low alloy steel, hardened and tempered. Can be replaced with wear & tear.
- The ridger is operated in tilled soil, the share point penetrates in the soil, displaces it to both sides and a furrow is created.

FIELD PREPARATION

SEED CUM FERTILIZER DRILL

Seed cum Fertilizer Drill is used for sowing seeds in prepared (tilled) fields with fertilizer.



KEY FEATURES

- Pitch of the seeds dropping is adjustable with the selection of sprockets
- Seed dropping is with a Vertical rotating disc with cells on its periphery.
- No. of rows – 4 & 5
- Row to row spacing is adjustable using sprockets & a chart
- Fertilizer metering – Sliding orifice type
- Weight of the seed drill ~ 150 kgs
- Diesel consumption is 1.25 ~ 1.5 lt / hour of operation

KEY BENEFITS

- The Seed Drill is especially suitable for sowing seeds
- Easy for mounting on the Hitch bracket with hitch pin.
- Suitable for sowing directly without prior seed preparation
- Simultaneously fertilizer can also be fed to the soil followed by seeds dropping.
- Saves seeds, diesel and tiller's working time
- Very economical for operation saving labour cost
- Eliminates laborious work of manual spreading of seeds.

INTER CULTIVATION

Inter-cultivation, also known as interculturing, is the cultivation of soil between crop rows. In other words, the soil between two rows of crop is ploughed using dedicated plough equipment for weeding, improving soil aeration and loosening the soil compaction.



KEY FEATURES

- 1.25 ~ 2 acres can be cultivated in 1 hour
- Average diesel consumption is 1 ~ 1.25 lts / hr of operation

KEY BENEFITS

- A simple design attachment helps for inter cultivation in between the rows of cotton crops.
- Weeds / unwanted grass / plants are removed by using this attachment without damaging the main cotton crop.
- A person can stand on the attachment and drive the tiller.
- The field can be levelled using a Blade in the place of cultivator.

SPRAYING

The sprayer unit is used for spraying pesticides and insecticides to avoid pests in the field.



KEY FEATURES

- 100% mixing of water and chemical is ensured during the spraying.
- Spraying pump is driven by the belt drive from the engine pulley.
- Available in 200 tank capacities, weight of spraying unit ~ 180 kgs
- Average diesel consumption is 1.25 ~ 1.5 lt per hour of operation.

KEY BENEFITS

- Useful for spraying of chemicals / insecticides on plants in open field.
- Nozzles are provided to ensure equal spreading of the spray on both sides of the tiller.
- Nozzle pressure can be adjusted.
- Spraying pump is driven by the belt drive from the engine pulley.

HAULAGE

TRANSPORTATION



KEY FEATURES

- Trailer capacity is maximum 1.5 tons.
- Standard dimensions – 3.85 x 1.10 x 0.40 mts (L x W x H)
- Average consumption of diesel is 1.0 lts ~ 1.25 lts / hr.
- Trailers can be suitably modified for:
 - Garbage collection & transportation
 - A tanker of maximum capacity 1000 litres for carrying drinking water

KEY BENEFITS

- Primarily required for transporting manure, chemicals, implements, produce etc.
- Trailer with a mechanical brake is commonly used.
- Hydraulic tipping type can be made on specific request.
- Spraying pump can be fitted with modification for spraying application.



VST SHAKTI

INDICATIVE COMMERCIAL OFFER – CUSTOM HIRING BY VST SHAKTI

SL.NO.	IMPLEMENTS	MRP (Rs.)	MRP (Rs.) as per SMAM GUIDELINE
1	Cultivator	7650	4590
2	Ridger	2500	2500
3	Seed Drill	30000	18000
4	Inter Cultivator	18250	18250
5	Generator with Stand	52500	52500
6	Water Pump	22000	22000
7	Trailer	55000	55000
8	Sprayer	29750	29750
	Total	217650	202590
9	VST Shakti 130 DI Power Tiller	155000	93000
10	Total with Tiller	372650	295590

Freight & taxes etc as applicable

Calculation as per SMAM (for subsidy) guidelines for assistance

PAY BACK PERIOD

SL. NO	DESCRIPTION	FUEL EXPENSES (Rs/hr)	MAINTENANCE OF TILLER & WEAR/TEAR (Rs/hr)	LABOUR COST (Rs/hr)	TOTAL EXPENSE (Rs/hr)	HIRING COST (Rs/hr)	NET INCOME (Rs/hr)	WORKING FOR 1 SEASON (90 ACRES)	EARNING - MRP (Rs.)	EARNING (Rs.) - SMAM GUIDELINE
1	Cultivator	60	10	50	120	500	380	240	91200	91200
2	Ridger	60	10	50	120	500	380	240	91200	91200
3	Seed Drill	72	15	50	137	450	313	290	90770	90770
4	Inter Cultivator	24	50	100	174	500	326	180	58680	58680
5	Sprayer	60	10	50	120	150	30	320	9600	9600
6	Water Pump	24	10	50	84	150	66	200	13200	13200
7	Generator	60	15	50	125	200	75	200	15000	15000
8	Trailer	48	15	50	113	175	62	360	22320	22320
TOTAL INCOME									391970	391970
IF 80% IS ACHIEVED									313576	313576
TOTAL INVESTMENT									372650	295590
DEPRECIATION @ 15%									55898	44339
NETT INCOME									257679	269238
ROI									69%	91%
PAY BACK PERIOD									~ 1.5 SEASONS	~ 1 SEASON

Assumption - 100% is 1 season

ASSUMPTIONS MADE

OPERATION	ACRES/DAY (8 HOURS)	ACRES /HOUR	NO. OF DAYS REQD FOR 90 ACRES	NO. OF HOURS
Cultivator	3	0.4	30	240
Ridger	4	0.5	23	180
Seed Drill	2.5	0.3	36	288
Inter Cultivator	4	0.5	23	180
Generator Set	4	0.5	23	180
Water Pump	5	0.6	18	144
Sprayer	4	0.5	23	180
Trailer	2	0.3	45	360

- Cultivator & Rotary assembly maintenance after every season ~ Rs. 5000/-
- Diesel cost Rs. 48 / ltr is considered
- Recommend service of power tiller at the end of season (includes change of oil and filters) - Rs. 3500/-
- Salary towards labour Rs. 7500 / month for working 8 hours a day for 25 days
- Recommended maintenance/service of Generator, Water pump & Sprayer ~ Rs. 3000/-

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